USDA Forest Service - Southern Research Station - 320 Green Street, Athens GA 30602 - http://www.srs.fs.usda.gov/disturbance

DISTURBANCE AND MANAGEMENT OF SOUTHERN ECOSYSTEMS

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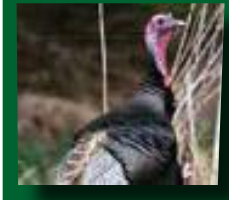
Outreach Activities:

- A total of 25 people came by the office at Brender Forest for information, but due to the hot, humid weather only 32 people hiked the Hitchiti Interpretive Trail. Some of these visitors came from as far away as Port St. Lucie, Florida.



- During the spring turkey hunt held in cooperation with the Piedmont National Wildlife Refuge, there were 38 turkeys taken, 3 coming off Brender Forest. The largest turkey weighed 20 pounds, with a 9 inch beard and 1.125 spur. One of the turkeys had 3 beards.

- Unit staff helped host 34 students visiting the Athens lab with the Georgia Plant Science Scholars (GAPSS) program. The visit was organized by Sharon Lumpkin with RWU-4505. Joe O'Brien, Kat Smith-Mordicai, Mac Callaham, Corey Babb, Ken Outcalt, Rick Reitz, and Ralph DiCosty showed student their work and gave them some hands-on experience with research. Pat Outcalt acted as tour guide for the group. The GAPSS program is an activity of the Plant Pathology Department at the University of Georgia designed for high school students who are trying to identify their career goals. GAPSS gives students the opportunity to visit four different plant science areas (Crop and Soil Sciences, Horticulture, and Plant Pathology and Entomology). Students spend three days on campus visiting the departments, going on various tours of the area, and having fun at two socials held in their honor. (See Photos on page 5)

Technology Transfer:

- John Stanturf attended the Fourth International Poplar Symposium, "Meeting the Needs of a Growing World through Poplar and Willow Science: Combining Traditional and Novel Approaches in the Genomic Era," held in Nanjing, China. The meeting was hosted by Nanjing Forestry University and IUFRO. John organized a plenary session on Using Poplars and Willows to Provide Ecosystems Services and Bioenergy, and moderated the session. He presented a paper in the plenary session, "The utility of poplars and willows for restoring forests in riparian zones." Shijong County around Nanjing has a tremendous amount of poplar and bills itself as the Home of Italian Poplar. Current practices to increase forest cover in the province by using poplars include the Four Sides Planting, in which farm fields are bordered by single rows of planted poplars; various agroforestry practices including chicken houses and mushroom growing houses within plantations; and growing winter wheat beneath a scattered overstory of poplars.


Houses for culturing mushrooms under a hybrid poplar canopy.


Hybrid poplar planted in a single row around a field edge, Shijong County, China.


Hybrid poplar riparian buffer strip to reduce soil erosion into the Grand Canal.

- Mac Callaham attended the National Conference on Invasive Species in Denver, Colorado, where he attended meetings of R8 and SRS personnel who are involved in invasive species work. The group was tasked with adapting the National Strategy and

Technology Transfer:

Implementation Plan to the specific needs of managers and researchers in the southeastern region. Callaham also presented a poster at the conference detailing work on invasive earthworms in collaboration with colleagues from UGA and the International Institute of Tropical Forestry.

• Alex Clark attended the Society of Wood Science and Technology Meeting and the Forest Products Society Annual International Meeting in Newport Beach, California. Alex presented a paper at the Forest Products Society Meeting entitled "Effect of tree age, rate of growth and geographic location on plantation loblolly pine wood stiffness and strength."

• Gary Achtemeier attended the FS/NOAA NCEP (National Center for Environmental Prediction) meeting in Washington, DC and presented a talk entitled "Daysmoke: Local & regional scale modeling of smoke released from prescribed burns during daytime." The purpose of this meeting was to exchange information on the air quality research activities of each group. While still in Washington, Achtemeier gave a brief presentation on Daysmoke and FCAMMS-GIS to the FCAMMS Directors. FCAMMS-GIS is a new initiative within the regional modeling centers to utilize the Google Earth capability. Scott Goodrick plans to make it the GIS engine for displaying all of our model outputs through SHRMC. There was a lot of interest in Google Earth at the EPA meeting in Research Triangle Park.

• Achtemeier gave an invited presentation at the Eastern Area Modeling Consortium Annual Meeting in East Lansing, Michigan, entitled "Local scale smoke modeling: PB-Piedmont, PB-Coastal Plain, and Daysmoke."

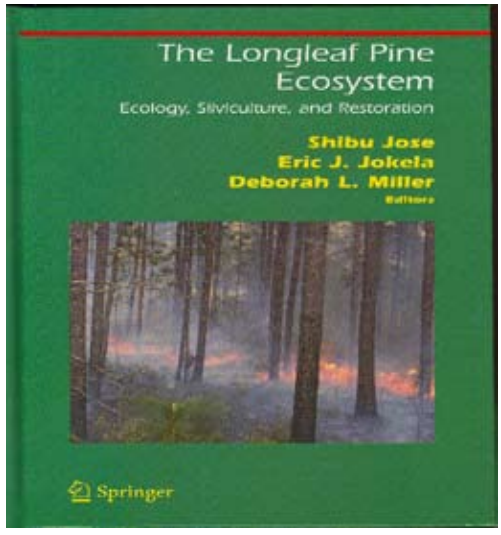
• Achtemeier gave an invited presentation entitled "BlueSky/RAINS-Southeast: What we did and what we learned" at the EPA Headquarters in Research Triangle Park, North Carolina.

• Yong Liu gave an oral presentation entitled "Modeling air quality effects of prescribed forest burns in the south with CMAQ-Daysmoke," co-authored by Gary Achtemeier and Scott Goodrick, at the Workshop on Agricultural Air Quality held in Potomac, Maryland. While there, Yong attended the Project Directors' meeting of the USDA National Research Initiative (NRI)

Technology Transfer:

Program.

• A new book edited by Shibu Jose, Eric J. Jokela, and Deborah L. Miller, "The Longleaf Pine Ecosystem: Ecology, Silviculture, and Restoration," features a chapter co-authored by Ken Outcalt, "Longleaf Pine Regeneration Ecology and Methods." Ken also authored a short inset, "Prescribed Burning for Understory Restoration." This book may be purchased with a credit card directly from Springer Publishing by calling 1-800-777-4643. You may also contact them by sending an e-mail to service@springer-ny.com or by writing to Customer Service, P. O. Box 2485, Secaucus, NJ 07096-2485. The book's ISBN is 0-387-29655-7 and the cost per copy is $125.00.



• The book edited by John Stanturf and Palle Madsen on restoring boreal and temperate forests, which was published last year, was reviewed in the journal, Forest Science, by Shibu Jose. According to the reviewer, "The editors have done a remarkable job of compiling 34 chapters, written by some of the most prominent scientists and practitioners in the field of ecological restoration. There is no question that Restoration of Boreal and Temperate Forests is a timely and welcome addition to the growing body of literature on ecological restoration." Ah, if only the editors could receive royalties.

• Kenneth Outcalt attended the Landfire Workshop for the Southeast Mapzone 56 in Tallahassee, Florida. He and other fire ecologists were invited to the workshop to describe and model the potential natural vegetation groups of this area and to review the NatureServe Ecological System Legend for the south. This was the first of a series of southern workshops to develop models, descriptions, and map layers for the National Landfire Project.

Meetings/Reports:

• John Stanturf met with the Threats Science Area leadership (Bruce Jewell, Danny Lee, Kier Klepzig, and Stanturf). They tentatively decided on six focus areas, or big science questions, on which the three work units could collaborate. The focus areas are impacts of storms on forest ecosystems, fragmentation and parcelization of forest land, invasive species, restoration of ecosystem structure, processes, and function, effects of global climate change and climate variability on eastern forests, and use of biomass reduction methods to lower risk of wildfire. Stanturf prepared a template for a Science Area Charter that was discussed at the SRS Management Team meeting in Atlanta.

• Unit scientists met to brainstorm a new focus for the unit, in light of realignments at the Station into Science Areas and at the Washington Office into Strategic Program Areas. We settled on a suggested title for our new work unit, the Center for Forest Disturbance Science: identified unique capabilities and how we fit into the Threats to Forest Health Science Area, and targeted key groups outside the Southern Research Station with whom we would like to form strategic alliances.

• John Stanturf attended the SRS Management Team Meeting, held in Atlanta. He participated in a panel on "Managing virtually in larger RWUs," sharing experience and lessons learned from the merger of five units into the Center for Bottomland Hardwoods Research in 1996. Janet Revell attended the concurrent meeting for administrative specialists. The two groups met together to discuss the report of the Administrative Realignment Team. Lynne Breland attended one day of the meeting, as she was already in Atlanta attending a pre-retirement seminar for Fish and Wildlife Service employees with her husband.

Visitors:

• Carlos A. Gonzales, a Ph.D. student in the Forest Resources and Conservation School at the University of Florida, visited with the Wood Quality Team. He worked with Mike Thompson to learn the procedures used to prepare and read wood quality samples on the project's x-ray densitometer.

Partnerships:

• Ken Outcalt met with Dale Pancake of Auburn University at the Solon Dixon Forestry and Education Center in Andalusia, Alabama, to discuss the future of the Fire and Fire Surrogate Study at that location. They agreed that the Dixon Center would maintain the study, continue burning appropriate treatment units as scheduled, and support our efforts to gain additional funding to continue the project for another 5 years.

• Yong Liu was invited to be a graduate committee member of the Center for Earth Observing & Space Research, George Mason University in Fairfax, Virginia.

• Yong Liu visited the NOAA Air Resource Laboratory in Washington, DC to discuss collaborating on a modeling study of fire-climate interactions.

Funding:

• Tom Waldrop and Mac Callaham received money from the Joint Fire Sciences Program to fund their work to re-examine their work on the relationship of fire intensity to overstory mortality and to examine early stand dynamics of young mixtures of pines and hardwoods. The study, "Low-intensity fires may be adequate for stand replacement of Table Mountain pine (Pinus pungens Lamb.) in the Southern Appalachian Mountains," was funded for a total of $125,000 over three years. (JFSP Project #06-4-1-01)

Personnel News:

• George Ross, Sr. and Wreather Sanford, Senior Community Service Employment Program participants at Brender Forest, received awards in June. They have worked on the forest for 8 and 7 ½ years respectively, and have been the primary workforce for the upkeep of the forest, performing such tasks as cutting the grass, preparing firelines for prescribed burning, tree planting, keeping roads open, and many other jobs associated with research studies.

"Thank You" for your hard work.

News from Around the Region:

• Frances Seymour has been named the next Director General of CIFOR, the Center for International Forestry Research in Bogor, Indonesia, beginning in late September. Seymour currently directs the Institutions and Governance Program of the World Resources Institute. Before that she worked in various tropical regions with the World Wildlife Fund, the Ford Foundation, and USAID. Her initial training was in zoology and public policy. Outgoing DG David Kaimowitz moves to the Ford Foundation office in Mexico City to work on community forestry issues in Mexico and Central America.

• The position as National Program Leader for Forest Products, which Howard Rosen held for many years before his retirement, is now open. The position is located in the Washington, DC office.

• Marianne Burke, formerly research ecologist at the Charleston, SC lab (Center for Forested Wetlands), has accepted a position in the Washington Office, FSR&D as Strategic Management System Specialist.

These Landsat 7 images show the damage that New Orleans, Louisiana received as a result of Hurricane Katrina. The image on the left shows New Orleans and the surrounding area on April 24th, 2005. The image on the right shows New Orleans on the morning of August 30th, 2005, just one day after Katrina made landfall.

• Hurricanes Katrina and Rita, and their effects on the Gulf Coast, continue to be featured in the news. The American Geophysical Union (AGU) convened an interdisciplinary 'Conference of Experts' on 11–12 January 2006 to discuss what Earth and space scientists know about the present and projected environment in New Orleans and the Gulf Coast areas affected by the hurricanes of 2005. A report has been issued, based on the considerations of 20 scientists for a coordinated effort to integrate science into the decision-making processes necessary for the area's sustainable rebirth. The objectives of the meeting were to review and assess the scientific knowledge in the areas most relevant in hurricane protection, to identify gaps in knowledge that could be filled by focused research, and to propose mechanisms to link science to the most effective reconstruction of New Orleans and other coastal areas affected by the recent hurricanes. The meeting attendees considered seven topics addressing the current understanding, near-term needs, and longer-term directions for: hurricanes, storm surge and flooding, subsidence, climate change, hydrology, infrastructure, and disaster preparedness and response. The report can be viewed at http://www.agu.org/report/hurricanes/hurricanes.pdf

• Recent developments in efforts to contain illegal immigrants were announced by the USDA Animal and Plant Health Inspection Service (APHIS) and the Customs and Border Protection (CBP) of the Department of Homeland Security. They will begin enforcing the third and final phase of the wood packaging material (WPM) regulation on July 5. All WPM, such as pallets, crates, boxes and pieces of wood used to support or brace cargo, must meet import requirements and be free of timber pests before entering or transiting through the United States. All WPM entering or transiting through the United States must be either heat treated or fumigated with methyl bromide as outlined in the International Standards for Phytosanitary Measures: Guidelines for Regulating Wood Packaging Material in International Trade (ISPM 15). The WPM must also be marked with an approved international logo, certifying it has been appropriately treated. APHIS and CBP will require the immediate re-exportation of any unmarked WPM, as it is not in compliance with the ISPM 15 treatment and marking standard. APHIS and CBP will also require the immediate re-exportation of any marked WPM that is found to be infested with a live wood-boring pest of the families Cerambycidae (longhorned beetle), Buprestidae (wood-boring beetles), Siricidae (woodwasps), Cossidae (carpenter moth), Curculionidae (weevils), Platypodidae (ambrosia beetles), Sesiidae (clearwing moths) and Scolytidae (bark beetles). The first phase of this regulation became effective Sept. 16, 2005. The regulations are based on the International Plant Protection Convention standards for WPM, which prescribe globally accepted measures to

reduce the risk of forest pest introductions via WPM. The United States is one of many countries that have adopted the international standards. Further information is available at the APHIS Web site at http://www.aphis.usda.gov/ppq/wpm/import.html or at CBP's http://www.cbp.gov/xp/cgov/import/commercial_enforcement/wpm/.

• Senesco Technologies, Inc. (Senesco) and ArborGen, LLC, announced that ArborGen will exercise its option to license Senesco's technology, based on positive results from the first year of field trials. Senesco and ArborGen have collaborated over the past four years in an effort to develop trees with greater biomass and shorter time to harvest. After three years of positive lab and greenhouse results, trees were established in the field in August 2004. At the end of the 2005 growing season, certain trees which were enhanced by the Senesco technology had approximately double the increase in volume relative to control trees. Senesco has developed technology that regulates the onset of cell death. Delaying cell breakdown in plants increases crop yields, plant size and resistance to environmental stress. Senesco believes that its technology can be used to develop superior strains of crops without any modification other than delaying natural plant senescence. (Source: PRNewswire)

• The heads of three Canadian forestry research institutes announced they will restructure into a single entity, based on positive votes of the boards and member companies. Don Banks, Chairman of the Board of FERIC, Phil Latos, Chairman of the Board of Forintek, and Frank Dottori, Chairman of the Board of Paprican, announced the creation of a new structure to spearhead their activities. Soaring energy prices, restrictions on available fiber, increased availability of low-cost foreign fiber, the value of the Canadian dollar, and the ongoing globalization of the industry are all factors, amongst others, that continue to pressure the Canadian Forest Sector were cited as the reasons behind the merger. The Institutes will be working together to develop an integration plan which will be presented to their respective members for final approval in the next six months. FERIC's goal is to improve Canadian forestry operations related to the harvesting and transportation of wood, and the growing of trees, within a framework of sustainable development. Forintek Canada Corp. is Canada's national wood products research institute. Forintek also conducts market and economic studies, and plays a key role in the development of building codes and standards, both nationally and internationally. Paprican, the Pulp and Paper Research Institute of Canada, is a leading not-for-profit research and technology institute that provides valuable technology transfer and cost-competitive research addressing both the short- term and strategic needs of its Members. (Source: PRNewswire)

• Weyerhaeuser has pledged to reduce greenhouse gas emissions 40 percent by 2020 while reducing its reliance on high-priced fossil fuels. A 40 percent reduction in annual greenhouse gases is the equivalent of taking 700,000 vehicles off the road for one year. "We will do this by harnessing the benefits of a renewable, natural resource — biomass — as fuel in the boilers that generate steam and electrical energy in our mills," said Ernesta Ballard, senior vice president, Corporate Affairs. According to Jonathan Lash, president of the World Resources Institute, "What Weyerhaeuser has done is exemplary, and it deserves to be recognized. Not only is the reduction of 40 percent one of the largest in the private sector, it is global in scope. As important, Weyerhaeuser is doing this in a way that makes a permanent difference – making changes in how their facilities operate." Biomass fuel consists of bark, lignin (the substance that binds wood fibers) and other organics in spent pulping chemicals. When biomass comes from sustainably managed forests, burning it has a neutral effect on greenhouse gas emissions. The regenerating forest absorbs the carbon dioxide released by burning the fuel. By contrast, the carbon dioxide released from burning fossil fuel is not offset. Weyerhaeuser's pulp and paper mills already generate 72 percent of their energy from biomass. This new initiative will raise this percentage, further moderating the effects of volatile oil and gas prices. Pulp mills, in particular, have the potential to become energy self-sufficient. In addition to substituting biomass fuel for fossil fuels, Weyerhaeuser will improve energy efficiency and install cleaner-burning boilers. The greenhouse gas reductions will be measured relative to Weyerhaeuser's emissions in 2000 and assume a comparable portfolio and regulations. Progress toward the commitment will be reported in the company's annual sustainability report. Weyerhaeuser's efforts to reduce greenhouse gas emissions are described in more detail in its 2005 sustainability report, available online at www.wy.com/environment/sustainability.

Photos from the Masthead: Technology Transfer at it's best. Students with the Georgia Plant Science Scholars Program

How does mercury work..

I could do that..

Cool you don't have to climb trees..

How cool are worms..

FY 2006 Publications (* denotes new publication this month)
Refereed Journals and Book Chapters

*Brockway, D.G., **Outcalt, K.W**., Boyer, W.D. 2006. Longleaf pine regeneration ecology and methods. Chapter 4 in Jose, S., Jokela, E.J., and Miller, D.L., editors. *The Longleaf Pine Ecosystem: Ecology, Silviculture, and Restoration.* Springer Verlag, New York; pp. 95-133.

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Stanturf, J.A. 2006. What is forest restoration? P. 23-36 in Proceedings of the 2006 Annual Meeting of the Korean Forest Society, Seoul National University, Seoul, Republic of Korea.

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***Waldrop, Thomas A.**; McIver, James. 2006. The national fire and fire surrogate study: early results and future challenges, in Connor, K.F., editor, Proceedings of the 13th Biennial Southern Silviculture Research Conference. Gen. Tech. Rep. SRS-92. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. pp. 526-530.

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Other Publications

Goodrick, S. Stanturf, J., Sullivan, F., Outcalt, P., Gillmore, G., McCracken, R., Mundy, E. 2005. Biennial Southern Silvicultural Research Conference Proceedings 1-12, 1980-2003. Archive and bibliography on CD-ROM.

Outcalt, K.W. 2005. Prescribed Burning Research in the Piedmont of Georgia. Demonstration Forest Project Hitchiti Experiment Forest, Jarrell, GA. [3-Panel Outdoor Display]

Outcalt, K.W. 2005. Prescribed Burning Research on the Hitchiti Experimental Forest. Demonstration Forest Project Hitchiti Experiment Forest, Jarrell, GA. [Information Card]

Outcalt, K.W. 2005. Long-term Dormant-Season Burning Study Located in the Palmetto/Gallberry Fuel Complex. Demonstration Forest Project Osecola National Forest, Olustee, FL. [Outdoor Display]

Outcalt, K.W. 2005. We can't keep fire out of these woods. We can only choose between prescribed burns or wildfire. Demonstration Forest Project Osecola National Forest, Olustee, FL. [Outdoor Display]

Outcalt, K.W. 2005. We can't keep fire out of these woods. We can only choose between prescribed burns or wildfire. Demonstration Forest Project Osecola National Forest, Olustee, FL. [Information Card]

Outcalt, K.W. 2005. Fire and Fire Surrogate Study in the Gulf Coastal Plain. October 2005 Solon Dixon Forestry and Education Center, Andalusia, AL [Bookmark]

Outcalt, K.W. 2005. Fire and Fire Surrogate Study in theSouthern Coastal Plain. October 2005 Myakka River State Park, Sarasota, FL [Bookmark]

Outcalt, K.W. 2006. Dormant-Season Prescription Fires Reduce Hazardous Fuel Loads on the South Carolina Coastal Plain. Demonstration Forest Project, Jamestown, SC. [2-sided outdoor display]

Waldrop, T. 2006. Ecological impacts of fuel reduction: presentations at a workshop held 24-25 January 2006 in Asheville, North Carolina. CD-ROM available from the RWU-4104, Athens, GA.

Abstracts and Posters

Achtemeier, Gary L., and Luke Naeher. 2005. Measurements of ground-level PM2.5 concentrations downwind from Southern prescribed burns. Sixth Symposium on Fire & Forest Meteorology and the 19th Interior West Fire Council Meeting, October 25-27, Canmore, Alberta, Canada. Sponsored by the American Meteorological Society [Poster]

Achtemeier, Gary L. 2005. On plume rise – matching Daysmoke with Briggs Equations for industrial stacks. Sixth Symposium on Fire & Forest Meteorology and the 19th Interior West Fire Council Meeting, October 25-27, Canmore, Alberta, Canada. Sponsored by the American Meteorological Society [Abstract]

Alahari, N., Sublette, K., Jennings, E., Thoma, G., Wolf, D., Duncan, K., **Callaham, M. Jr.**, Todd, T. 2005. Earthworms as ecoengineers in the restoration of oil and brine impacted soils following remediation. International Petroleum Environmental Conference, November 2005, Houston, Texas [Abstract]

***Callaham, M.A., Jr.**, G.G. Gonzalez, B.A. Snyder, C.Y. Huang, and P.F. Hendrix. 2006. Out of sight, out of mind: The invasion right under your feet. Poster presentation at USDA Forest Service National Conference on Invasive Species, Denver, CO, June, 2006. [no published abstract]

Callaham, M.A., Richter, D.D., Hofmockel, M. 2005 Long-term land use effects on soil invertebrate communities in Southern Piedmont soils. Ecological Society of America annual meeting, 8-11 August, Montréal, Canada [Poster]

Callaham, M.A., Jr., Stanturf, J.A., Boerner, R.E.J. 2005. Viewing ecosystem restoration through the glass of soil ecology: Making use of the illuminated ped. Symposium Honoring Dr. David C. Coleman, 28-29 October, Athens, Georgia [Poster]

Callaham, M.A. Jr., Todd, T.C., Kitchen, D.J., Blair, J.M., Williams, M.A., Rice, C.W. 2005. Long-term studies on soils and soil biology in a Kansas tallgrass prairie: Stories that only time can tell. Invited symposium presentation at the Soil Science Society of America Annual Meeting, 6-10 November, Salt Lake City, Utah [Abstract]

Camp, D.L., S.R. Bennett, M.A. Callaham, Jr., and P.F. Hendrix. 2006. Native and exotic earthworm effects on C and N dynamics in a growth chamber experiment. Poster Presentation at 12th Annual Ecology Student Symposium at the University of Georgia, Institute of Ecology, Athens, GA. [Published abstract]

Canfield, J.M., Linn, R, Cunningham, P., **Goodrick, S.L.** 2005. Modeling effects of atmospheric stability on wildfire behavior. Sixth Symposium on Fire & Forest Meteorology and the 19th Interior West Fire Council Meeting, October 25-27, Canmore, Alberta, Canada. Sponsored by the American Meteorological Society [Abstract]

Cunningham, P**., Goodrick, S.L.** 2005. High-resolution numerical model simulations of fire plume dynamics. 2005. Sixth Symposium on Fire & Forest Meteorology and the 19th Interior West Fire Council Meeting, October 25-27 Canmore, Alberta, Canada. Sponsored by the American Meteorologica,l Society [Poster**]**

DiCosty, Ralph J., Callaham Jr., Mac A., Stanturf. John A. 2005. Atmospheric deposition and re-emission of mercury estimated in a prescribed forest fire experiment in Florida, USA. Soil Science Society of American Annual Meeting, 6-10 November, Salt Lake City, Utah [Poster]

*Gardiner, E.S. and **Stanturf, J.A**. 2006. The utility of poplars and willows for restoring forests in riparian zones. In Abstracts International Poplar Symposium IV, Tang, L., Fang, S., Huang, M., Zhuge, Q., Li, H., and Chen, Y., compilers. 5-9 June 2006, Nanjing, China; p. 131. [Abstract]

Giai, C., **Callaham, M.A. Jr.,** and Boerner, R.E.J. 2006. A mechanistic approach to determining why fire and thinning affect soil organic matter and nutrient status in Appalachian oak forests. Central Hardwoods Forest Conference, February 27-March 1 2006, Knoxville, TN [Poster]

Goodrick, S.L. 2005. Building historical gridded weather data sets for fire program analysis. Sixth Symposium on Fire & Forest Meteorology and the 19th Interior West Fire Council Meeting, October 25-27, Canmore, Alberta, Canada. Sponsored by the American Meteorological Society [Poster]

Goodrick, S.L., Cunningham, P. 2005. A mechanism for the formation of transverse horizontal vortices on wildland fires. Sixth Symposium on Fire & Forest Meteorology and the 19th Interior West Fire Council Meeting, October 25-27, Canmore, Alberta, Canada. Sponsored by the American Meteorological Society [Abstract]

Goodrick, S.L., Hanley, D.E. 2005. Atmospheric teleconnections and wildfires in the southeastern United States. Sixth Symposium on Fire & Forest Meteorology and the 19th Interior West Fire Council Meeting, October 25-27, Canmore, Alberta, Canada. Sponsored by the American Meteorological Society [Poster]

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Linn, R.R., Canfield, J., Winterkamp, J., Cunningham, P., Colman, J., Edminster, C**., Goodrick, S.L.** 2005. Numerical simulations of fires similar to those of the international crown fire modeling experiment. Sixth Symposium on Fire & Forest Meteorology and the 19th Interior West Fire Council Meeting, October 25-27, Canmore, Alberta, Canada. Sponsored by the American Meteorological Society [Abstract]

Liu, Y.-Q., G. Achtemeier and S. Goodrick. 2005. CMAQ-Daysmoke as a Smoke and Air Quality Management Technique: A Case Study of a Prescribed Burning in Georgia. In: Proceedings Sixth Fire and Forest Meteorology Symposium, October 25-27, Canmore, AB, Canada [Abstract]

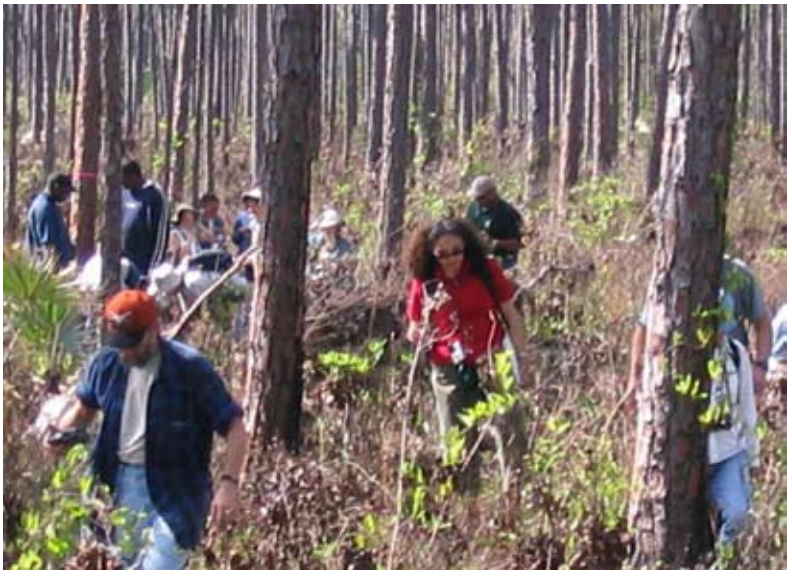
Liu, Y. 2006. A physical based forest fuel moisture scheme for high-resolution fire modeling. 2005. In: Proc. 2006 Annual Meeting of the American Meteorological Society, 30 January 22 February 2006, Atlanta, GA [Abstract]

Outcalt, K.W., Wade, D. 2005. Response of a mixed longleaf (*Pinus palustris*) and loblolly pine (*Pinus taeda*) community to long-term dormant season prescribed burning. Ecological Society of America annual meeting, 8-11 August, Montréal, Canada [Poster]

Outcalt, K.W. 2005. Frequency and season of prescription fires to reduce hazardous fuel loads on the lower Piedmont of Georgia. In: Proceedings of the Annual Joint Fire Science Program Principal Investigator Workshop, November 1, San Diego, California. [Poster]

Sanchez, Felipe, Coleman, M., Garten, C.T., Luxmoore, R., **Stanturf, J.A**., Wullschleger, S.D. 2005. Soil carbon, after three years, under short rotation woody crops grown under a range of nutrient and water availability. Soil Science Society of American Annual Meeting, 6-10 November, Salt Lake City, Utah [Abstract]

Stanturf, J.A., Burbridge, P.R., Gardiner, E.S., Perdue, J.H. 2005. Disturbance in the face of climate change: Incorporating disturbance into management of coastal forests. International Workshop on the Scale of Natural Disturbances from Tree to Stand; 29 September to 1 October, Palanga, Lithuania; Lithuanian Forest Research Institute, Kaunas, Lithuania. [Abstract]



Vegetation in Abaco National Park, The Bahamas.

Upcoming Events:

2006

Jul 9-15 — 18th World Congress of Soil Science, in Philadelphia, PA http://www.18wcss.org

*Jul 11, 13 — Fuels Management Workshops in Florida. Outcalt & O'Brien to conduct.

Jul 18 — Wood Quality Consortium, UGA, Athens, GA. Clark to attend and present.

Jul 18 — 14th Biennial Southern Silvicultural Research Conference Planning Committee Meeting, Athens, GA. Stanturf, Breland & K. Outcalt to attend

Jul 18-20 — Advances in Threat Assessment and Their Application to Forest and Rangeland Management, Boulder, Colorado; http://www.forestencyclopedia.net/encyclopedia/threats

Jul 25-26 — Workshop for Cumulative Watershed Effects of Fuel Management, Atlanta, GA. Outcalt to attend.

Aug 2-4 — Southern Regional Conference on Forestry Technology Transfer and Science Delivery, Little Rock, Arkansas; http://sref.info/2006/techtransfer

Aug 6-11 — Eighth International Conference on Mercury as a Global Pollutant Madison, WI; http://www.mercury2006.org/ ; DiCosty to attend and present paper

Aug 6-11 — Ecological Society of America annual meeting, Memphis, TN; http://www.esa.org/memphis/

Aug 8-10 — Forest and Water in a Changing Environment Beijing, China; Chinese Academy of Forestry, Beijing Forestry University and Southern Research Station.

Aug 22-25 — 5th European Conference on Ecological Restoration: "Land use changes in Europe as a challenge for restoration ecological, economical and ethical dimensions" University of Greifswald, Germany http://www.uni-greifswald.de/SER2006

Aug 28-Sep 1 — IEA Bioenergy Task 29, Task 31 and Task 39, International Workshop "Biofuels and Bioenergy: Challenges and Opportunities," University of British Columbia, Vancouver Canada; http://www.ieabioenergytask31.org/

Sep 11-14 — Baltic-Scandinavian Disturbance Network annual meeting, Tromsø, Norway with field excursions to Lapland in Finland (Alta, Lakselv and Kilpisjärvi); http://www.eau.ee/~ecosyst/index.php?page=coming

Sep 24-26 — SESAF Meeting, Auburn, AL

Sep 25-28 — 2006 biennial meeting Short Rotation Woody Crops Operations Working Group, Red Lion Inn, Pasco, Washington; tentatively, joint meeting with Poplar Council of Canada, US Poplar Council, IUFRO Temperate Short Rotation Forestry Working Party 1.03.02, and SAF Agroforestry Working Group;

Sep 25-27 — UFRO Oak Silviculture Working Party (1.06) meeting, Stevens Point, WI; optional pre-conference field trip to SW WI on Sept 21-23, and optional post-conference tour to northern WI on Sept 28-30.

Sep 26-19 — Patterns and Processes in Forest Landscapes; Consequences of Human Management, University of Bari, Italy; IUFRO 8.01.03 Landscape Ecology; http://www.greenlab.uniba.it/events/iufro2006/

Oct 4-7 — IUFRO and EFI International Meeting, "Ecosystem Goods and Services from Planted Forests," Bilbao, Spain; http://www.iefc.net

Oct 10-13 — Conference on "Sustainable Forest Management with Fast Growing Plantations", Charleston, SC; contact Dave Wear dwear@fs.fed.us

Oct 25-29 — Society American Foresters Annual Meeting, Pittsburgh, PA

Oct 23-27 — Knowledge management in forestry conference, sponsored by KnowForAlp, hosted by Forest Research Institute Baden Württemberg, Freiburg, Germany

*Nov 7-9 — 2nd National Experimental Forest and Range Workshop, Bent Creek Experimental Forest, Asheville, North Carolina

Nov 8-9 — National Agenda 2020 Forest Productivity and Technology Workshop, Washington, DC

Nov 12-16 — Soil Science Society of American Annual Meeting, Indianapolis, IN; http://www.indy.org

Nov 13-17 — 3rd International Fire Ecology and Management Congress, San Diego, CA; http://emmps.wsu.edu/firecongress/

Nov 14-16 — SRS Management Team Meeting, joint with Region 8; Atlanta.

2007

*Jan 31-Feb 3 — International Meeting of Fire Effects on Soil Properties, Barcelona. http://www.ub.edu/gram/

Feb 26-Mar 1 — 14th Biennial Southern Silvicultural Research Conference, Athens, GA;

Apr 18-19 — IUFRO conference Leading Forestry Research in an Era of Globalization (tentative title); Washington, DC

May 13-17 — 4th International Wildland Fire Conference, Sevilla, Spain; http://www.fire.uni-freiburg.de/course/meeting/2007/meet2007_01.htm

May 14-18 — IUFRO Forest Landscape Restoration Conference, Seoul, South Korea; venue is COEX in Seoul; http://www.coex.co.kr/

May? — North American Forest Biology Workshop, hosted by the Hard wood Tree Improvement and Regeneration Center, Purdue University; http://www.agriculture.purdue.edu/fnr/HTIRC/

*Jun 6-8 — EastFire II Conference, George Mason University, Fairfax, VA; http://eastfire.gmu.edu/temp/eastfirewatch/conference.htm

Summer — 6th North American Forest Ecology Workshop, to be held in British Columbia

Oct 24-28 — Society American Foresters Annual Meeting, Portland, OR.

Nov 4-8 — Soil Science Society of American AAnnual Meeting, New Orleans, LA; http://www.neworleanscvb.com

2008

Nov 5-9 — Society American Foresters Annual Meeting, Reno, NV.

Upcoming Events:

2009

World Forestry Congress, Buenos Aires, Argentina

Joe and Ken touring Abaco National Park.

Group of 34 students visiting the Athens Lab. This tour was part of the University of Georgia Plant Science Scholars program (GAPSS).

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GPRA -Accomplishment

Category	FY 2004 Total	FY 2005 Total	FY 2006 To Date
Number of Refereed Journal Publications	20	21	23
Number of Non-Refereed Publications (include abstracts)	89	60	57
Number of Publications (refereed + non-refereed)	109	81	80
Number of Tours	41	40	29
Number of Short Courses/Training	20	13	22
Number of Invited Presentations to Scientific Organizations	12	7	20
Number of Invited Presentation to Lay Organizations	30	32	28
Volunteer Presentations to Scientific Organizations (non-GPRA	42	50	20
Number of Technology Transfer Activities (other than above)	105	132	85
Outside Funding	$2,610,574	$3,688,734	$2,007,253

SRS-4104 Project Leader's Report

John Stanturf - Editor Lynne Breland - Technical Writer
Patricia A. Outcalt - Production, Design and Layout

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